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THE PUBLIC'S OPINIONS ON EXISTING OR POTENTIAL FEDERAL FALLOUT SHELTER PROGRAMS

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Summary

This report analyzes data obtained from a national probability sample of 2,000 adult Americans. The questionnaire was prepared and the analysis performed by Michigan State University. The data were collected by Elmo Roper and Associates in June, 1962.

The study obtained indices of public attitudes toward the probability of nuclear war, the utility of fallout shelters, and the desirability of various civil defense programs of the Office of Civil Defense. We also analyzed response differences that were related to various demographic variables, and compared three groups which are maximally different in their receptivity to shelter programs.

Public Attitudes

About 1 American in 4 believed that the United States would be involved in a nuclear war within the next 20 years. About 1 in 2 rejected this idea and the remaining 25% were undecided. The public was split almost 50-50 on the question of the utility of shelters. About half thought shelters would help and the other half thought they would not.

In spite of this split, however, most Americans were in favor of the four existing or proposed governmental shelter programs (i.e., marking-provisioning, changing existing buildings, including shelter space in new buildings, and providing financial help in constructing shelters). Any given program was supported by at least 2 out of 3 respondents and half of the respondents favored all four. In addition most Americans were either satisfied with the present or proposed programs (45%)--or believed the government should do more (26%). Only 14% thought the government should be doing less, and the remaining 15% were undecided.

Relationships among Attitudes

We found no relationship between an individual's opinion as to the likelihood of war and his belief or disbelief in the utility of shelters. These two variables appear to be independent. Both, however, are related to acceptance of a shelter program; i.e., those who believed war is likely were slightly more favorable toward shelters, and those who believed shelters would help were much more likely to favor a shelter program.

Relationships between Demographic Variables and Attitudes

People in the South, people on farms, females, Negroes, and people in the lowest socio-economic levels were most likely to feel that we will be involved in a nuclear war within 20 years. Belief in the utility of shelters was held most strongly by younger citizens and those in the highest socio-economic levels. People over 50 years old were least convinced of the utility of shelters.

The level of support for the existing or proposed programs is relatively constant throughout the country, among occupation groups, and among citizens living in towns of varying sizes. Females and younger citizens were most supportive.

Negroes and those in the lower socio-economic levels were most likely to suggest the government should do more. Whites, those in the higher socio-economic levels or in managerial positions, and older citizens were most likely to suggest the government should do less than it is now doing.

Table of Contents

Topic	Page
Statement of Objectives	1
The Questionnaire	2
The Sample	6
Analysis of Results	8
Survey Responses	8
Relationships Among Attitudes on Three Issues	16
Relationships Between Demographic Variables and Attitudes	20
Analysis of Three Special Groups	31
Summary, Discussion, and Recommendations	35

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The Public's Opinions on Existing or Potential Federal Fallout Shelter Programs

As part of the attitudinal research program being conducted by the Department of Communication for the Office of Civil Defense (Department of Defense) under Contract OCD-OS-62-10, a national survey was completed in June of this year. The survey was intended to assess public attitudes on three issues:

a. The probability that the United States will be attacked with nuclear weapons within the next ten to twenty years.

b. The extent to which fallout shelters would offer protection in case of nuclear attack.

c. The value of existing or potential fallout shelter programs which could be initiated by the Federal Government.

In addition to these basic issues, we also were interested in the relationships among issues and in the relationship between (a) opinions on these questions and (b) various demographic data such as age, race, sex, etc.

Our earlier work (to be presented in a subsequent report) also has concerned itself with these issues; however, these data were not drawn from a national sample. Rather, the data were collected in eight selected cities and are being used to interpret the impact of the present government information program. The national sample will help us estimate the confidence with which we can generalize our other data to the country as a whole. It also provides specific information on public attitudes in June toward several aspects of the civil defense shelter program.

Michigan State University does not retain its own national field interviewing staff. In order to obtain a reliable national sample, the Elmo Roper and Associates organization was retained to conduct the field work. Roper personnel prepared the sample, administered the questionnaire, and prepared

the data for machine analysis. Michigan State, after consultation with personnel of the national Office of Civil Defense, was responsible for most of the questionnaire and all of the analysis. Two of the questions were constructed by OCD personnel.

The questionnaire

The questionnaire included eight substantive questions covering the three areas of interest mentioned above. It also included seven demographic items which permitted us to categorize respondents with respect to: geographic area of the country, size of community, occupation, sex, age, race, and socio-economic level.

Probability of attack.

One question was used to index this variable. The question was:

> "One thing we are interested in is how people feel about the possibility of nuclear war in, say the next 10 to 20 years. In your opinion, what are the chances that a war will occur in which some country will attack the United States with nuclear weapons during the sixties or the seventies. Do you believe we will be attacked or we won't be attacked?"
>
> Will be attacked
> Won't be attacked
> Don't know
> No answer

Fallout Shelters and the Saving of Lives.

Two questions were used to assess public confidence in shelters as protection against radioactive fallout. The first question, constructed for our prior research, was:

> "Let's suppose ther is a nuclear war. Think for a moment about people who live far enough away to escape the bomb blast. If these people have fallout shelters, what do you think their chances are for escaping death or severe radiation sickness from fallout radiation? Do you think they have a very good

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chance of avoiding radiation sickness, some chance, very little chance, or no chance of avoiding radiation sickness or death?"

Very good chance
Some chance
Very little chance
No chance
Don't know
No answer

OCD personnel pointed out that both the President of the United States and the Secretary of Defense had urged Americans to approve of fallout shelters as a means of saving lives, and requested knowledge of that fact in a second question. Michigan State and Elmo Roper and Associates did not take responsibility for the wording of the second question, because of our concern that the use of the terms "president" and "Secretary of Defense," although accurate, might tend to bias the answers, and there obviously was no way to balance this bias with the use of individuals of "equal status" as spokesmen for the anti-shelter position. Actually, use of both questions allowed for a partial test of the possible bias introduced by the use of "President" and "Secretary of Defense;" i.e., the credibility of these sources on this question. The question, constructed by OCD personnel, was:

"The President, the Secretary of Defense, and some prominent scientists have said that America should have fallout shelters because fallout shelters will save a significant number of lives in case this country is attacked. Some other prominent scientists have disagreed. These scientists say that we should not have a shelter program because shelters won't save a significant number of lives in case of nuclear attack. How do you feel about this? Do you believe that shelters will or will not save a significant number of lives if we have an attack?"

Will save a significant number of lives
Will not save a significant number of lives
Don't know
No answer

Existing or Potential Federal Shelter Programs.

The federal government is now completing a survey of existing buildings,

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subways, and other spaces with the intent of marking these spaces and stocking them with provisions to be used in case of emergency. In addition, it has been proposed that the government initiate programs to: (a) encourage some changes in existing buildings to increase their protection factor, (b) encourage the inclusion of fallout shelter space in the design of new buildings, and (c) provide funds for some kinds of non-profit institutions to help them produce fallout shelter space in their own buildings. Four questions were designed, each of which tested public acceptance or rejection of one of these four proposed ideas. The three questions on potential programs were:

"Many existing buildings could provide more fallout shelter if minor changes, such as bricking in basement window areas and addition of some ventilation equipment, are made in them; are you in favor or opposed to a program for changing these existing buildings to provide more shelter space?"

In favor of changing existing buildings
Opposed to changing existing buildings
Don't know
No answer

"Are you in favor or opposed to a program for including fallout shelter space in the design of new, larger buildings?"

In favor
Opposed to
Don't know
No answer

"The government is proposing to help schools, colleges, and hospitals to meet the cost of making suitable rooms and basements in their buildings adequate as public fallout shelters; are you in favor or opposed to this government help?"

In favor
Opposed to
Don't know
No answer

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The question relevant to the present survey-marking-stocking program was created by OCD personnel. This question was:

"The Government is completing a survey of large buildings, subways, and the like. Enough corridors, inner rooms, basements and so on have been found to protect over 50 million people against fallout radiation. Should or should not these protected areas, which already exist, be marked and provisioned for use in an emergency?"

Should be marked and provisioned
Should not be marked and provisioned
Don't know
No answer

Michigan State and Elmo Roper and Associates were concerned about possible bias in this question, introduced by (a) the statements that this already is an on-going program and (b) the specific statement that these spaces will "protect over 50 million people against fallout radiation." There is evidence that some people are more likely to favor any program which the government has already put into operation and there is some disagreement over whether this program will definitely protect 50 million people. OCD personnel pointed out that it is in fact an on-going program and expressed their conviction that the "50 million people" figure was an accurate one. OCD agreed to take responsibility for the wording of this question, and it was included in the questionnaire:

A final question was included on general attitudes toward the overall Governmental fallout shelter program. This question was:

"By surveying existing buildings and by financial assistance to schools, colleges and hospitals, the Government is trying to stimulate a National effort to provide protection against fallout for everyone in the United States within five years. Do you think the Government should do more to provide protection in the event of an attack, do you think this is just about the right kind of program, or do you think the Government is doing too much in this area?"

Think the Government should do more
This is about the right kind of program
Think the Government is doing too much

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Respondents who said the government should do more were asked: "What else do you think the Government should do?" Respondents who said the government is doing too much were asked: "What do you think the Government is doing that it should not be doing?" The content of these open-end answers was coded and grouped into theme areas.

A specification of the demographic items will be included in the description of the survey sample.

The Sample

In all, Elmo Roper and Associates obtained 2,000 interviews with a national cross section of men and women aged 21 and over. Interviewing was conducted in 125 sampling locations throughout the country. The sampling locations were selected using probability procedures, after first stratifying the counties in the United States for geographical area and degree of urbanization. Within locations, blocks were selected at random proportionate to population where block statistics are available. In smaller cities blocks were selected at random and interviews assigned to each block in proportion to the number of dwelling units found on each. In rural areas interviewers were assigned specific rural routes, selected at random from state highway maps. Controls were designed for age and employed women to insure that these characteristics would be properly represented. Male interviews were done primarily after 5 p.m. Interviewing was conducted between June 13 and 15, 1962, both dates inclusive.

The representativeness of the sample along each of the seven demographic variables employed is illustrated below. All figures are expressed in percentages of the overall 2000 cases.

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Geographic Area of the Country

New England	6%	East South Central	7%
Middle Atlantic	19%	West South Central	10%
East North Central	20%	Mountain	4%
West North Central	9%	Pacific	11%
South Atlantic	14%		

Size of Community

Over 1,000,000	10%	2,500 to 25,000	19%
250,000 to 1,000,000	12%	Towns under 2,500	5%
100,000 to 250,000	7%	Open Country	31%
25,000 to 100,000	16%		

Occupation

Professional or executive	5%	Factory labor	10%
Small store or shop proprietor	4%	Non-factory labor	9%
Personal service and protective	10%	Homemaker	33%
Farm proprietor	4%	Other	10%
White collar (clerical and sales)	12%	No answer	1%
Farm labor	2%		

Sex

Male	50%
Female	50%

Age

21-34	20%
35-49	32%
50 &	37%
No answer	1%

Race

White	90%
Negro	10%

Socio-economic level

Roper interviewers are instructed to assess the economic status of the neighborhood, the size, age, and condition of his home, and what can be observed in regard to his physical possessions and standard of living. On the basis of these assessments, the respondent is assigned to one of four main socio-economic groups for this country: A (highest), B, C, and D (lowest). According to Roper and Associates, surveys usually turn up between 3 and 5 per cent "A's," between 10 and 20 per cent "B's," between 50 and 60 per cent "C's," and between 20 and 30 per cent "D's." There is no direct translation of the class level into income level; however, roughly, the

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average income of an "A" family is $15,000 or over; of a "B" family, $8,000--$15,000; of a "C" family, $3,500--$8,000; and of a "D" family, less than $3,500. The percentage breakdown for this survey was as follows:

A	2%
B	21%
C	57%
D	18%
No Judgment	2%

Analysis of Results

The report of the survey findings is divided into three sections: (a) the straight tabulation of responses, (b) the relationships among the three major issues, and (c) the relationships between responses on those issues and various demographic data.

The Survey Responses

Probability of attack. In answer to our question on the respondent's opinion about the chances that a war will occur during the sixties or the seventies in which some country will attack the United States with nuclear weapons, about 1 respondent in 4 said that we will be attacked, about 2 in 4 said that we would not be attacked, and a little less than 1 in 4 said he didn't know, i.e., he had no opinion. Specific percentages were:

Will be attacked	26%
Won't be attacked	52%
Don't know-no opinion	22%

Fallout shelters and the saving of lives. The first index of opinion as to the effectiveness of shelters in case of attack was obtained from the question:

> "Let's suppose there is a nuclear war. Think for a moment about people who live far enough away to escape the bomb blast. If these people have fallout shelters, what do you think their chances are for escaping death or severe radiation sickness from fallout radiation? Do you think they have a very good chance of avoiding radiation sickness, some chance, very little chance, or no chance of avoiding radiation sickness or death?"

The proportion of respondents for each category was as follows:

Very good chance	21%
Some chance	36%
Very little chance	25%
No chance	10%
Don't know	8%

We can reduce these response categories somewhat if we accept "very good chance" or "some chance" as a favorable category, and "very little chance" or "no chance" as an unfavorable category. Under this grouping (used for subsequent analyses), between 5 and 6 out of 10 Americans believe that shelters would help in avoiding radiation sickness, between 3 and 4 out of 10 Americans believe that shelters would not help, and about 1 in 10 has no opinion. Specific percentages are:

Very good or some chance	57%
Very little or no chance	35%
Don't know	8%

The second index of opinions as to the effectiveness of shelters referred to the dispute between (a) the President, the Secretary of Defense and some prominent scientists vs. (b) other prominent scientists as to whether shelters would save a significant number of lives. The proportion of respondents in each category was:

Will save a significant number of lives	51%
Will not save a significant number of lives	40%
Don't know	9%

We were interested in the relationship between responses to these two questions: i.e., the extent to which the two questions seemed to index the same thing--level of trust in shelters as a protective device in case of attack. The overall percentages are quite similar. More precisely, if we eliminate those subjects who said they had no opinion on one or both of these questions, we obtain the following results from a cross-tabulation of the two sets of responses

	Question 2					
Question I	Will save lives		Won't save lives		Total	
Very good-some chance	74%	(774)	26%	(272)	100%	(1046)
Very little-no chance	29%	(193)	71%	(483)	100%	(676)

It is quite clear that most people (better than 7 out of 10) answered both of these questions in the same way; however, it is equally clear that about 3 people in 10 did not see these two items as asking the same question. In light of the inherent fuzziness surrounding such concepts as (a) how many people would live far enough away to escape the bomb blast, (b) the meaning for various individuals of "a significant number of lives,", etc., these differences are not surprising. It would appear that the use of the status of the President or of the Secretary of Defense had no significant effect on responses to the second question; however, further analyses in this report will be restricted to the first index of opinion.

Existing or Potential Federal Shelter Programs. The questionnaire assessed the level of public acceptance or rejection of four specific governmental shelter programs: (a) the marking and stocking of existing space, (b) the alteration of existing buildings to provide more space, (c) the inclusion of shelter space in the construction of new large buildings, and (d) partial financial support by the Government as a help to schools, colleges and hospitals which want to adapt their buildings to provide more space. Responses to these four questions were:

1. Marking and provisioning existing space

Should be marked and provisioned	86%
Should not be marked and provisioned	7%
Don't know	7%

2. Changing of existing buildings

In favor of changing existing buildings	64%
Opposed to changing existing buildings	22%
Don't know	14%

3. Inclusion of shelter space in new, larger buildings

In favor	68%
Opposed	20%
Don't know	12%

4. Government financial support to schools, colleges and hospitals to aid in adapting buildings

In favor	77%
Opposed	17%
Don't know	6%

The data indicate clearly that each of these four programs is supported by the majority of Americans. The marking-provisioning program received overwhelming support (86% in favor). The proposal to change existing buildings received the least support; however, even here, nearly 2 out of 3 respondents favored this program.

In addition to the individual percentages, we can group respondents in terms of how they answered all four of these questions; i.e., how many people supported all four programs, how many three, etc. These tabulations are presented below for the 1961 respondents who expressed an opinion on all four programs.

Number of Programs Supported	Percentage Supporting
All Four Programs	49%
Three of the Four Programs	22%
Marking, Including, Supporting	10%
Marking, Changing, Supporting	2%
Marking, Changing, Including	3%
Changing, Including, Supporting	2%

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Number of Programs Supported	Percentage Supporting
Two of the four Programs	13%
Marking, Supporting	6%
Marking, Including	3%
Marking, Changing	2%
Including, Supporting	2%
One of the Four Programs	9%
Marking	7%
Supporting	2%
None of the Four Programs	7%
	100%

Nearly half (49%) of all of the respondents responded favorably to all four of the governmental programs; only 7% responded negatively to all.

The final substantive question related to the Federal Government's shelter program asked:

> "By surveying existing buildings and by finacial assistance to schools, colleges and hospitals, the Government is trying to stimulate a National effort to provide protection against fall-out for everyone in the United States within five years. Do you think the Government should do more to provide protection in the event of an attack, do you think this is just about the right kind of program, or do you think the Government is doing too much in this area?"

The proportion of responses in each category was:

This is about the right kind of program	45%
Think the Government should do more	26%
Think the Government is doing too much	14%
Don't know	15%

Again, the data are a clear indication that better than 2 out of 3 Americans either are satisfied with the present Government program (as they understand it) or think the Government should be doing more. About 1 person in 7 thinks the Government is doing too much.

In an attempt to pinpoint the specific suggestions of those people who favor an intensified program as well as the specific criticisms of those who are opposed to the present program, we asked one additional open-end question of the people who either felt the Government should be doing more or felt it should be doing less. The 26% of the sample who felt the Government should be doing more were asked: what else do you think the Government should do? The dominant group of responses (37% of these respondents answered this way) suggested that the Government should build and/or provide fallout shelters. The second most frequent response (11%) called for an increased information and education program as to what citizens should do in case of attack. The complete set of responses is reproduced below (note: group totals add to more than 100%, and subtotals may add to more than group totals, because some respondents gave more than one answer).

"What else do you think the Government should do?"

Asked of respondents who thought the Government should do more to provide protection in the event of an attack--26% of total sample

		Total asked this question	
Number of respondents		511	100%
		#	%
1. BUILD, PROVIDE FALLOUT SHELTERS		(190)	37
Build fallout shelters, provide more shelters to protect everyone; build shelters here (no further information).	(106)	21	
Build, provide centrally located shelters in populated areas.	(39)	8	
Build, provide shelters for areas outside of cities--in smaller, rural places.	(20)	4	
Build, provide fallout shelters in schools, protect the children.	(19)	4	
Build shelters that offer real protection--good, safe shelters.	(6)	1	
Build and provision the shelters adequately.	(5)	1	

2.	INSTRUCT, EDUCATE THE PUBLIC IN CIVIL DEFENSE: GIVE PUBLIC MORE INFORMATION ON WHAT TO DO IN CASE OF ATTACK TO PROTECT THEMSELVES.	(58)		11
3.	SHOULD DO ALL THEY CAN TO PROTECT US (no further information).	(44)		9
4.	SPEED UP THEIR PLANS FOR PROTECTION; DON'T JUST TALK ABOUT IT--DO IT.	(41)		8
5.	FINANCIALLY HELP OTHERS TO BUILD SHELTERS	(35)		7
	Subsidize, help finance private individuals to build their own shelters.	(20)	4	
	Subsidize, help finance local communities to build, provide shelters.	(13)	3	
	Lessen the costs of shelters so individuals can afford them.	(4)	1	
6.	ENCOURAGE, EDUCATE OTHERS TO BUILD SHELTERS	(15)		3
	Encourage, educate private individuals to build shelters.	(10)	2	
	Encourage, educate local communities, groups to build, provide shelters.	(6)	1	
7.	BUILD UP DEFENSES; KEEP UP ARMS RACE	(17)		3
8.	WORK FOR PEACE; PREVENT WAR	(14)		3
9.	DO MORE RESEARCH ON RADIATION, FALLOUT SHELTERS--TO DEVELOP SAFE ONES IF POSSIBLE.	(12)		2
10.	STOP TESTING NUCLEAR WEAPONS	(6)		1
11.	STOP BUILDING, ENCOURAGING FALLOUT SHELTERS--THEY ARE USELESS (DO SOMETHING ELSE INSTEAD. BUILD UP ARMS, WORK FOR PEACE, ETC.)	(3)		1
12.	MENTIONED OTHER GOVERNMENT PROGRAMS--UNEMPLOYMENT.	(7)		1
13.	ALL OTHER	(14)		3
14.	DON'T KNOW	(113)		22
15.	NO ANSWER	(5)		1

The 14% of the sample who felt the Government is doing too much were asked: What do you think the Government is doing that it should not be doing? For this group, the dominant group of responses (41% of these respondents answered this way) suggested that the Government is spending and/or wasting too much money. The second most frequent group of responses (23%) implied that the Federal Government is taking responsibility that should be left to private initiative and the individual states. The complete set of responses is reproduced below (note: again, totals will add to more than 100%).

"What do you think the Government is doing that it should not be doing?"

Asked of respondents who thought the Government should do less to provide protection in the event of an attack--14% of total sample

		Total asked this question	
Number of respondents		279 #	100% %
1. SPENDING, WASTING TOO MUCH MONEY		(115)	41
Spending too much money (no further information).	(18)	6	
Wasting money, spending money unwisely (no further information).	(15)	7	
Money spent on shelters, civilian protection is useless, wasted; could be used for better purposes.	(59)	21	
Spending too much money on shelters, civilian protection--should limit their program.	(20)	7	
Spending too much money on shelters, civilian protection--others could provide it more cheaply.	(3)	1	
2. TAKING AWAY PRIVATE, STATE RESPONSIBILITIES		(63)	23
Taking away individual, private responsibility.	(45)	16	
Taking away, state, local responsibility.	(14)	5	
Too much Government in everything (no further information).	(7)	3	

3. PROMOTING USELESS SHELTERS, PROTECTION PROGRAMS--THERE IS NO PROTECTION AGAINST NUCLEAR WAR (NO MENTION OF MONEY)	(27)	10
4. MENTIONED OTHER GOVERNMENT PROGRAMS--KING-ANDERSON BILL: FOREIGN AID, SPACE, ETC.	(22)	8
5. STRESSING CIVILIAN PROTECTION AND SHELTERS AND SHOULD BE TRYING TO PREVENT WAR, OR BUILDING UP ARMS	(17)	6
6. SCARING, FRIGHTENING PEOPLE	(11)	4
7. EMPHASIZING WAR INSTEAD OF PEACE	(8)	3
8. ENCOURAGING, FRIGHTENING PEOPLE INTO SPENDING MONEY FOR INDIVIDUAL SHELTERS	(6)	2
9. DOING TOO MUCH IN OTHER AREAS--NOT ENOUGH FOR CIVILIAN PROTECTION OR SHELTERS	(5)	2
10. TESTING NUCLEAR WEAPONS	(3)	1
11. ALL OTHER	(14)	5
12. DON'T KNOW	(28)	10
13. NO ANSWER	(9)	3

This completes the presentation of the survey responses. We can turn our attention now to the relationships, if any, among attitudinal positions on these three major issues.

Relationships Among Attitudes on Three Issues

Probability of attack--utility of shelters. Results of a cross-tabulation between responses to the question on the probability of a nuclear attack and responses to the question on one's chances of escaping radiation sickness, given a shelter, are presented below.

Probability of Attack	Chances of Escaping Radiation Sickness: Very Good--Some	Little-None	Don't Know	Total
Will be attacked	59%	37%	4	100% (510)
Won't be attacked	59%	36%	5	100% (1044)
Don't Know	50%	33%	17	100% (429)

For those who have an opinion on the probability of attack, there is no relationship between the nature of that opinion and an estimate of the value of a shelter as protection against radioactive fallout; i.e., these two attitudes appear independent.

Probability of attack--Federal Shelter Programs. Those who believe we will be attacked were compared with those who believe we will not be attacked, in terms of their support of each of the four shelter programs.

Percent in Favor Of:	Probability of Attack: Will Be Attacked	Won't Be Attacked
Marking-Provisioning	88%	87%
Changing Existing Bldg	71%	64%
Including Space	74%	68%
Financial Support	82%	76%

There is no relationship between the respondent's opinion as to whether we will or will not be attacked and his favorability toward the marking and provisioning of existing spaces; however, people who believe we will be attacked are somewhat more favorable to the other three proposed shelter programs.

This relationship can be made clear another way. If we categorize respondents into five groups on the basis of how many of the programs they favor (i.e., four, three, two, one, or none), we can determine the percentage

of those who believe we will (or won't) be attacked which falls in each of these five groups.

	Probability of Attack	
No. of Programs Favored	Will Be Attached	Won't Be Attached
Four	57%	48%
Three	21%	21%
Two	10%	14%
One	7%	10%
None	5%	7%
	100%	100%

Again, there is a statistically significant linear relationship between these two sets of opinions, although not an extremely large relationship. People who believe we will be attacked are somewhat more likely to favor existing or proposed government shelter programs; however, it is interesting to note that 48% of those who don't believe we will be attacked still are in support of a rather large-scale government effort in providing shelter space.

Fear of attack would not seem to be the crucial variable in predicting whether people will favor or oppose a governmental program in this area. In support of this suggestion, the data indicate no differences between the "attacked-yes" and the "attacked-no" groups with respect to their general support of the government's program. Forty-seven percent of those who believe we will be attacked think the government's program is "just about the right kind of program." Forty-eight percent of those who believe we will not be attacked also think the program is just about right. Those who believe we will be attacked are somewhat more likely to call for more action from the government (30% vs. 25%) while those who believe we will not be attacked are somewhat more likely to say the government is doing too much (16% vs. 12%); however, the differences in both cases are rather small.

Utility of Shelters--Federal Shelter Programs. The final analysis of relationships among the attitudinal issues involved a comparison between those who believed shelters would provide protection against radiation sickness and those who believed they wouldn't. These two groups were compared with respect to their favorability toward the four governmental shelter programs.

	Chances of Escaping Radiation Sickness	
Percent in Favor Of:	Very Good--Some	Little-None
Marking-Provisioning	93%	79%
Changing Existing Bldg.	74%	54%
Including Space	78%	57%
Financial Support	85%	69%

There is an understandably strong relationship between the respondent's opinion as to the utility of shelters as a protection against radiation and his support of the various governmental programs. People who believe that shelters would provide a good chance of escaping radiation sickness are significantly more likely to favor each of the four governmental programs. What is surprising, and probably indicative of the confused state of public opinion on the shelter issue, is the large percentage of people who are in favor of the four governmental programs---even though they say they believe that shelters would provide little or no protection in the event of an attack. Some of the experimental research planned by Michigan State and other contractors should help explain the basis for this relationship.

Again, the relationship between these two variables can be made clear by categorizing respondents into the five "program support" groups. The table below shows the percentage of people who believe shelters will (or won't) help which fall in each of these five groups.

No. of Programs Favored	Chances of Escaping Radiation Sickness: Very Good--Some	Little-None
Four	58%	40%
Three	24%	19%
Two	10%	15%
One	6%	14%
None	2%	12%

There is a statistically significant linear relationship between these two sets of opinions, and a rather extreme one. As one would expect, people who believe that shelters will help are significantly more likely to favor all of the governmental programs while people who feel they won't help are more likely to be opposed to all of them. Again, what is surprising is the large proportion (40%) of the people who believe shelters won't work, but who nevertheless are in favor of all four of the governmental programs.

Belief in the utility of shelters seems to be an important variable in predicting whether people will favor or oppose a governmental shelter program, although it by no means serves as a sufficient predictor.

People who believe that shelters will help are more likely to believe that the proposed governmental program is just about right (53% said this as contrasted with only 38% of those who said that shelters won't help). Twenty-nine percent of the "shelters will help" group think the government should do more; 22% of the "shelters won't help" group also think the government should do more. Only 8% of the "shelters will help" group think the government should do less while 24% of the "shelters won't help" group expressed the opinion that the government should reduce its program.

Relationships between Demographic Variables and Attitudes

The data were analyzed further in order to isolate possible systematic relationships between each of the seven demographic variables and (a) esti-

mates of the probability of nuclear attack, as well as attitudes toward (b) the utility of shelters, (c) the four governmental programs, and (d) the government's program in general. To simplify the analysis, respondents who had no attitude on an issue (i.e., responded "don't know" or gave no response) were eliminated from the analysis of that issue.

Geographic Area of the Country.

The original nine areas of the country were reduced to four for this analysis: The East (New England, Middle Atlantic); the South (South Atlantic, East South Central, West South Central); the Northern Middle West or the North (East North Central, West North Central); and the West (Mountain, Pacific).

1. Probability of attack.

	Probability of Attack		
Geographic Area	Will Be Attacked	Won't Be Attacked	Total
East	26%	74%	100% (381)
South	45%	55%	(460)
North	27	73	(471)
West	31	69	(242)
Entire Country	33	67	(1,554)

People in the South are significantly more likely to believe that the United States will be attacked with nuclear weapons. There are no other regional differences of a significant nature. For most of the country, it is safe to estimate that about 3 persons out of 10 expect an attack. In the South, between 4 and 5 people in 10 have this kind of expectation.

2. Utility of Shelters.

There were no significant regional differences on opinions as to whether shelters would affect the chances of avoiding radiation sickness.

3. Federal Shelter Programs.

There were no regional differences in level of favorability toward the four governmental shelter programs.

4. Overall Governmental Shelter Program.

The four geographic regions do not differ with respect to either the proportion of people who are satisfied with the present program or the proportion of people who want a larger or smaller program.

Size of Community.

Respondents were grouped into one of four categories for this analysis: cities of 250,000 or more; cities between 25,000 and 250,000; towns under 25,000; farms or open country.

1. Probability of Attack.

	Probability of Attack		
Size of Community	Will Be Attacked	Won't Be Attacked	Total
250,000 +	30%	70%	100% (348)
25,000--250,000	28%	72%	(367)
Towns under 25,000	33%	67%	(379)
Farms-Open Country	39%	61%	(460)
Entire Country	33%	67%	(1,554)

People on farms are significantly more likely to expect a nuclear attack; however, the differences are not extremely large. There are no other significant differences among population groups on this question.

2. Utility of Shelters.

Citizens of different sized communities did not differ on whether they thought shelters would or would not help.

3. Federal Shelter Programs.

There were no significant differences among population groups.

4. Overall Governmental Shelter Program.

There were no significant differences with respect to either level of satisfaction with the present program or the proportion of people who believe we should have a larger or smaller program.

Occupation.

The original employment categories were reduced to six: Managerial--professional, executive, store proprietor; Laboring--personal services, factory labor, non-factory labor; Farming--farm proprietor, farm labor; White Collar; Homemaker; and Miscellaneous--retired, student, unemployed, etc.

1. Probability of attack.

	Probability of Attack		
Occupation	Will Be Attacked	Won't Be Attacked	Total
Managerial	24%	76%	100% (155)
Laboring	34%	66%	(462)
Farming	45%	55%	(84)
White Collar	20%	80%	(222)
Homemaker	36%	64%	(477)
Miscellaneous	38%	62%	(146)
Entire Country	33%	67%	(1,547)

There were sizable differences among these six occupational groups. Only about 1 white collar worker in 5, and only about 1 managerial person in 4 believed that we would be attacked; however, nearly 1 person in 2 (45%) of those who own or work on farms expressed this feeling. The size of the "farm" sample is small; nevertheless, it would seem safe to assume that there is a significant difference between the beliefs of these two occupational groups.

2. Utility of Shelters

Occupation	Chances of Escaping Radiation Sickness: Very Good--Some	Little-None	Total
Managerial	68%	32%	100% (176)
Laboring	62%	38%	(533)
Farming	64%	36%	(107)
White Collar	68%	32%	(237)
Homemaker	59%	41%	(609)
Miscellaneous	53%	47%	(169)
Entire Country	62%	38%	(1,831)

The significant difference among the groups on this question can be attributed almost in its entirety to the relatively small number of people in the "miscellaneous" group who believed that shelters would be of help. Other than this, there were no significant differences among the occupation groups on this question.

3. Federal Shelter Programs.

Occupation	No. of Programs Favored: 3 or 4	1 or 2	0	Total
Managerial	60%	30%	10%	100% (182)
Laboring	75%	20%	5%	(576)
Farming	68%	27%	5%	(113)
White Collar	73%	21%	6%	(243)
Homemaker	74%	20%	6%	(647)
Miscellaneous	65%	23%	12%	(189)
Entire Country	71%	22%	7%	(1,950)

People holding managerial positions were significantly less likely than members of other groups to be in support of most or all (3 or 4) of the proposed government programs. There were no significant differences among the other occupational groups.

4. Overall Governmental Shelter Program.

The six occupational groups did not differ significantly with respect to the proportion of people who feel the present governmental program is just about right (slightly more than half of those who had an opinion were in this category); however, there were significant differences in the propor-

tion who suggested a larger rather than a smaller program.

	Attitudes Toward Overall Program			
Occupation	Do More	Do Less	About Right	Total
Managerial	21%	31%	48%	100% (168)
Laboring	36%	13%	51%	(523)
Farming	35%	22%	43%	(99)
White Collar	28%	17%	55%	(214)
Homemaker	28%	12%	60%	(530)
Miscellaneous	28%	21%	51%	(156)
Entire Country	30%	16%	54%	(1,690)

The managerial group was significantly less likely to suggest that the government "do more" and significantly more likely to suggest that it should "do less." There were no other significant differences among the occupational groups.

Sex

There were significant but relatively small differences between male and female responses on 3 of the 4 key questions.

1. Probability of Attack.

	Probability of Attack		
Sex	Will Be Attacked	Won't Be Attacked	Total
Male	29%	71%	100% (829)
Female	37%	63%	(725)
Entire Country	33%	67%	(1,554)

Women were significantly more likely to feel that we would be attacked with nuclear weapons within the next ten to twenty years; however, the differences between male and female responses is not great.

2. Utility of Shelters.

There were no significant sex differences on opinion as to whether shelters would affect the chances of avoiding radiation sickness.

3. Federal Shelter Programs.

	No. of Programs Favored			
Sex	3 or 4	1 or 2	0	Total
Male	69%	24%	7%	100% (983)
Female	74%	20%	6%	(978)
Entire Country	71%	22%	7%	(1,961)

Again, there were small but significant differences. Women were somewhat more likely to favor all or most of the proposed shelter programs.

4. Overall Governmental Shelter Program.

	Attitudes Toward Overall Program			
Sex	Do More	Do Less	About Right	Total
Male	32%	20%	48%	100% (890)
Female	28%	13%	59%	(809)
Entire Country	30%	17%	53%	(1,699)

Women were significantly more likely to be satisfied with the present program. Men were more for change--to both an expanded and a more restricted program.

Age

Respondents were divided into three age groups: 21-34; 35-49; and 50 or older. There were significant differences among these groups.

1. Probability of Attack.

The young group was significantly less likely to believe we would be attacked in the next 10 to 20 years. There was no difference in response between the two older groups.

	Probability of Attack		
Age	Will Be Attacked	Won't Be Attacked	Total
21-34	28%	72%	100% (502)
35-49	35%	65%	(521)
50 +	35%	65%	(526)
Entire Country	33%	67%	(1,549)

2. Utility of Shelters.

Age	Chances of Escaping Radiation Sickness: Very Good--Some	Little--None	Total
21-34	69%	31%	100% (576)
35-49	65%	35%	(596)
50 +	52%	48%	(662)
Entire Country	62%	38%	(1,834)

Respondents of age 50 or over were significantly less likely to feel that shelters would provide help in escaping radiation sickness. About 2 out of 3 respondents between 21 and 49 years of age expressed confidence that shelters would help; however, only about 1 in 2 older people felt this way.

3. Federal Shelter Programs.

Age	No. of Programs Favored: 3 or 4	1 or 2	0	Total
21-34	80%	18%	2%	100% (593)
35-49	73%	20%	7%	(634)
50 +	63%	27%	10%	(726)
Entire Country	71%	22%	7%	(1,953)

Again, there is a consistent relationship between age and attitude toward the proposed programs. The older the respondent, the less likely he is to support the government programs.

4. Overall Governmental Shelter Program.

Respondents in the youngest age group are most likely to be satisfied with the present governmental program. The three age groups do not differ with respect to wanting an expanded program; however, the oldest group is significantly more likely to feel that the government should quit doing some of the things which it is now doing.

	Attitudes Toward Overall Program			
Age	Do More	Do Less	About Right	Total
21-34	31%	10%	59%	100% (538)
35-49	33%	16%	51%	(550)
50 +	26%	23%	51%	(603)
Entire Country	30%	16%	54%	(1,691)

Race

Comparisons were made of the responses given by whites and Negroes to each of the key attitudinal questions.

1. Probability of Attack.

	Probability of Attack		
Race	Will Be Attacked	Won't Be Attacked	Total
White	30%	70%	100% (1,386)
Negro	56%	44%	(151)
Entire Country	33%	67%	(1,537)

There was a quite large and significant group difference in response to this question. Of those respondents who had an opinion on this issue, less than 1 in 3 whites said that we will be attacked; however, better than 1 in 2 Negroes felt that way.

2. Utility of Shelters.

There were no differences between the two groups' opinions as to whether shelters would affect the chances of avoiding radiation sickness.

3. Federal Shelter Programs.

	No. of Programs Favored			
Race	3 or 4	1 or 2	0	Total
White	70%	24%	6%	100% (1,736)
Negro	82%	14%	4%	(201)
Entire Country	72%	22%	6%	(1,937)

Negro respondents were significantly more likely to favor most or all of the proposed governmental programs. Of the whites, 70% said they approved of 3 or 4 of the proposed programs; 82% of the Negro respondents answered this way.

4. Overall Governmental Shelter Program.

The two groups did not differ in the proportion who feel the present program is just about right; however, Negroes were significantly more likely to call for an expanded program and whites were significantly more likely to suggest a reduction in the program.

Attitudes Toward Overall Program

Race	Do More	Do Less	About Right	Total	
White	29%	17%	54%	100%	(1,521)
Negro	40%	8%	52%		(178)
Entire Country	30%	16%	54%		(1,699)

Socio-Economic Level

The final analysis related attitudinal responses to the socio-economic status of the respondent. It was found to be a highly relevant predictive variable.

1. Probability of Attack.

	Probability of Attack		
Socio-Economic Level	Will Be Attacked	Won't Be Attacked	Total
A (High)	20%	80%	100% (41)
B	28%	72%	(335)
C	31%	69%	(889)
D (Low)	47%	53%	(261)
Entire Country	33%	67%	(1,526)

There is a consistent relationship between socio-economic status and fear of attack---the lower the respondent's socio-economic status, the more likely he is to feel that we will be attacked with nuclear weapons. At the highest level, only 1 person in 5 expressed this attitude. At the

lowest level, almost 1 in 2 felt this way.

2. Utility of Shelters.

With respect to respondent attitudes toward the value of shelters in avoiding radiation sickness, the highest socio-economic group is significantly more likely to believe that shelters would help.

	Chances of Escaping Radiation Sickness			
Socio-Economic Level	Very Good--Some	Little--None	Total	
A (High)	71%	29%	100%	(49)
B	64%	36%		(415)
C	60%	40%		(1,060)
D (Low)	61%	39%		(306)
Entire Country	62%	38%		(1,810)

3. Federal Shelter Programs.

Again, there is a clear and consistent relationship between socio-economic status and level of approval of the four proposed shelter programs; the lower the respondent's socio-economic level, the more likely he is to favor most or all of the government programs.

	No. of Programs Favored				
Socio-Economic Level	3 or 4	1 or 2	0	Total	
A (High)	64%	32%	4%	100%	(49)
B	68%	25%	7%		(415)
C	70%	23%	7%		(1,132)
D (Low)	81%	14%	5%		(332)
Entire Country	71%	22%	7%		(1,928)

4. Overall Governmental Shelter Program.

Socio-economic level did not differentiate the proportion of respondents who are satisfied with the present program; however, the higher one's socio-economic status, the less likely one is to favor an expanded shelter program and the more likely one is to favor a restricted program.

Socio-Economic Level	Attitudes Toward Overall Program: Do More	Do Less	About Right	Total
A (High)	16%	28%	56%	100% (45)
B	26%	23%	51%	(359)
C	30%	15%	55%	(972)
D (Low)	37%	10%	53%	(296)
Entire Country	30%	16%	54%	(1,672)

Analysis of Three Special Groups

In addition to the analyses reported above, we were interested in a final analysis of three specific groups of respondents. One of these groups can be labelled as "inconsistent." One can be labelled as maximally receptive to civil defense messages and the third can be labelled as minimally receptive to civil defense messages.

In analyzing public attitudes toward shelters within the context of the questions of (a) the probability of war, (b) the value of shelters as a protective device, and (c) the governmental programs proposed, we can assume that people who believe that war is likely and that shelters will help would tend to favor shelter programs. On the other hand, people who believe that war is unlikely and that shelters won't help should, logically, oppose shelter programs. Most of our respondents' responses were consistent with this assumption; however, we found one group of subjects which was inconsistent.* This group of 45 subjects (out of the total 2000) believed that:

> Inconsistent
> War is unlikely, shelters wouldn't help, but I'm in favor of the proposed programs and think the government should do more in this area.

In other words, these subjects represent people who are in favor of shelters, but not for "the right reasons."

Our maximally and minimally receptive groups also can be defined in terms of their responses to these four questions. The maximally receptive

*Another group of inconsistent subjects would include those who believe that war is likely and shelters would help---but who oppose a shelter program. Only 10 subjects were in this group; therefore, we didn't include them in this analysis.

group, consisting of 34 subjects, believed that:

> Maximally Receptive
> War is likely, shelters would provide a "very good" chance of avoiding radiation sickness, I'm in favor of all four of the governmental programs and think the government should be doing more.

The minimally receptive group, consisting of 17 subjects, believed that:

> Minimally Receptive
> War is unlikely, shelters would provide "no" chance of avoiding radiation sickness, I'm opposed to all four of the governmental programs and think the government is doing too much in this area.

Demographic Analyses.

These three groups constitute a very small segment of the total sample; consequently, analyses involving them can produce only speculative results, possibly data which will be valuable in leading to other more detailed research studies. The "inconsistent" group included only 2¼% of the sample; the maximally receptive group included only 1½% of the sample; the minimally receptive group included slightly less than 1% of the sample. Among other things, these low percentages indicate the lack of polarity of attitude structure on the question of the building of shelters.

Recognizing the limitations imposed by the smallness of these sub-samples, one can still observe some interesting characteristics of the three groups when they are compared with the entire sample on each of the seven demographic variables indexed.

1. Geographic Area.

	Three Special Groups			
Geographic Area	Incon-sistent	Maximal receptive	Minimal receptive	Total Sample
East	33%	17%	18%	25%
South	25%	56%	35%	31%
North	25%	12%	29%	29%
West	17%	15%	18%	15%
Sample Size	45	34	17	2,000

The inconsistent group is slightly over-represented in the East and both the maximal and minimal receptivity groups are slightly under-represented there. The maximally receptive group is greatly over-represented in the South and highly under-represented in the North. Other than that, there are no significant differences among the groups with respect to geographic location.

2. Size of Community.

Size of Community	Three Special Groups: Inconsistent	Maximal receptive	Minimal receptive	Total Sample
Towns-Cities	84%	74%	71%	69%
Open Country	16%	26%	29%	31%

Preliminary analysis indicated no differences among the three groups with respect to the size of the urban community; however, there were differences when all urban communities were grouped and compared with farms and open country. The inconsistent group is highly over-represented in the towns and cities and therefore under-represented in the open country. The maximal-minimal receptivity groups do not differ from each other or from the total sample.

3. Occupation.

Occupation	Three Special Groups: Inconsistent	Maximal receptive	Minimal receptive	Total Sample
Managerial	9%	15%	12%	9%
Laboring	49%	41%	29%	29%
Farming	11%	12%	0%	6%
White Collar	9%	6%	23%	12%
Homemaker	25%	17%	18%	33%
Miscellaneous	7%	9%	18%	11%

Respondents in laboring jobs are highly over-represented in both the inconsistent and the maximally receptive groups (both of which favor shelters). Respondents who earn their living on the farm also tend to be somewhat over-represented in both of these groups. On the other hand,

white collar workers tend to be over-represented in the minimally receptive group. As indicated in earlier analyses, females in the home (homemakers) are under-represented in both of the extreme groups (maximal and minimal receptivity).

4. Sex.

	Three Special Groups			
Sex	Inconsistent	Maximal receptive	Minimal receptive	Total Sample
Male	67%	74%	59%	50%
Female	33%	26%	41%	50%

Males are over-represented in all three of the special groups. In other words, as indicated above, males are more likely than are females to take one of the extreme positions; furthermore, males are also more likely to be inconsistent in their position.

5. Age.

	Three Special Groups			
Age	Inconsistent	Maximal receptive	Minimal receptive	Total Sample
21-34	33%	44%	12%	30%
35-49	40%	44%	6%	32%
50 +	27%	12%	82%	38%

This analysis provides striking evidence of the effects of age on public attitudes toward shelters. Age is not particularly related to membership in the inconsistent group--although older people are somewhat under-represented in this group and people between 35 and 49 years of age are somewhat over-represented. Age is highly related to maximally and minimally receptive attitudes. People over 50 are greatly under-represented in the maximally receptive group and greatly over-represented in the minimally receptive group. People under 50 are over-represented in the maximally receptive group and under-represented in the minimally receptive group.

6. Race.

Race	Three Special Groups: Inconsistent	Maximal receptive	Minimal receptive	Total Sample
White	89	76	94	90
Negro	11	24	6	10

The inconsistent and the minimally receptive groups do not differ from each other or from the total sample with respect to the proportions of whites and Negroes in the groups. Whites are under-represented in the maximally receptive group and Negroes are over-represented in that group.

7. Socio-Economic Level.

Socio-Economic Level	Three Special Groups: Inconsistent	Maximal receptive	Minimal receptive	Total Sample
A (High)	2	0	7	2
B	11	18	7	22
C	71	46	61	58
D (Low)	16	36	26	18

The inconsistent group and the minimally receptive group are both under-represented in the upper socio-economic levels, and the maximally receptive group is slightly under-represented as well. All three groups are over-represented in the lower socio-economic levels.

Summary, Discussion, and Recommendations

This final section of the report is divided into three parts: a summary of the major findings of the survey, a discussion of some of the implications of those findings, and a presentation of some recommendations for further research.

Summary of Findings

Public Attitudes. As of June of 1962, about one adult American in 4 believed that there will be a nuclear war involving the United States within

the next 10 to 20 years. About 2 in 4 rejected the idea of such a war, and the remaining 1 in 4 did not express an opinion.

The public is almost evenly divided on the question of the utility of shelters in case of attack. Between 5 and 6 out of 10 Americans believe that shelters would provide some chance or a very good chance of avoiding radiation sickness for people who live far enough away from a target to escape blast effects. When the question was asked within the context of the belief of the President and the Secretary of Defense as to the value of shelters, about 5 out of 10 said that shelters would save a significant number of lives and the other 5 out of 10 either said that shelters wouldn't save a significant number of lives or else didn't express any opinion.

Half of the American public is in favor of all four of the proposed governmental shelter programs (i.e., marking-provisioning, changing existing buildings, including space in new buildings, and providing financial help in constructing shelters). Any given program was supported by at least 2 out of 3 respondents. The marking-provisioning program was most popular---85% were in favor of it.

Most Americans are either satisfied with the proposed governmental programs or believe the government should do more. Between 4 and 5 in 10 believe the present program is just about right; between 2 and 3 in 10 believe the government should do more; between 1 and 2 in 10 believe the government is doing too much; between 1 and 2 in 10 did not express an opinion at all.

When asked what more the government should do, the most frequent response was that the government should build or provide fallout shelters. When asked what the government should quit doing, the most frequent responses were: (1) quit spending-wasting so much money on shelters; and, (2) quit taking away responsibilities which should be left to either the individual or to state and local governments.

Relationships among Attitudes. The major variable of interest to those responsible for developing a shelter program is the public's acceptance of shelters. We found that both public belief in the probability of war and public belief in the utility of shelters were related to acceptance of shelters; however, it was clear that the crucial variable was the utility of shelters, not the probability of war. In other words, people who believed there will be a war are only slightly more likely to favor the government's shelter programs while people who believe that shelters will help are much more likely to favor such programs.

There was no observed relationship between an individual's opinion as to the likelihood of war and his belief or disbelief in the utility of shelters.

Relationships between Demographic Variables and Attitudes. The belief that the United States will suffer a nuclear attack was held most strongly by people in the South, by people living on farms or in open country, by females, by Negroes, and by people in the lowest socio-economic level. People whose occupation is either farm ownership or farm labor also were strong in their belief in the chance of attack; however, subsequent analyses revealed that this finding could be attributed to the high proportion of Negroes in the farm-labor category.*

The only demographic variables related to a belief in the utility of shelters were age and socio-economic level. Younger citizens were much more likely to believe that shelters would help, as were citizens in the highest socio-economic level. People over 50 years of age are significantly less convinced of the value of shelters.

*These later analyses indicated that the correlations involving the South, people living on farms or in open country, and low socio-economic levels remained--even when Negroes were removed from the sample.

General support of the proposed or existing governmental programs does not differ from one section of the country to another, from large cities to small towns or farms, or among occupation groups. Strongest support for these programs comes from females rather than males, and from younger people rather than older people.

Of those dissatisfied with the present program, some think the government should be doing more and some think it should be doing less. Respondents in managerial positions, respondents over 50 years of age, whites, and respondents in the higher socio-economic levels were most likely to suggest that the government should do less. Negroes and respondents in the lower socio-economic levels were most likely to suggest that the government should do more.

Special Group Analyses. A small group of citizens (about 2 to 3 per cent), although of the opinion that there will not be a war and that shelters wouldn't help if there was one, support the proposed governmental programs. This group probably consists primarily of people who are in favor of "government programs" for their own sake; e.g., people in this group are over-represented among urban, laboring, younger, and lower-socio economic males. Another very small group (less than 1% of the population), although of the opinion that there will be a war and that shelters would help, are opposed to the proposed governmental programs. This group consists almost entirely of upper socio-economic people.

People who are maximally receptive toward shelter programs (about 1 to 2 per cent) differ from the total sample in that they are more likely to be found in the South, (and less likely to be found in the North), more likely to earn their living in laboring or farm jobs, more likely to be male, much more likely to be under 50 years of age, more likely to be Negroes, and somewhat more likely to be in the lower socio-economic level of society.

People who are minimally receptive toward shelter programs (about 1% of the population) differ from the total sample in that they are more likely to be white-collar workers, much more likely to be over 50 years of age, and also are more likely to be in the lower socio-economic levels.

Discussion of Implications

The results of this study have at least four important implications for the determination and implementation of policy relevant to communication of the government's shelter program. These concern:

1. The prevailing attitude of the public.

Public attitude in June, 1962, can be summarized as favorable---but not intense. Most people are in favor of the proposed governmental shelter programs; however, very few people are extremely favorable or extremely unfavorable. The fact that only about half the people believe that shelters would help in case of war, and the observed relationship between this belief and approval of the proposed shelter programs, suggests that one of the major communication objectives of the Office of Civil Defense should be an increase in public belief as to the utility of shelters.

2. Specific target audiences.

The maximum reception and approval of the proposed shelter programs comes from the young, from Negroes, from females, and from members of the lower socio-economic levels. The minimum reception and approval comes from citizens over 50 years of age, and members of the higher socio-economic levels In the local community, older and higher socio-economic citizens share a major role in any decision-process on shelters or other civil defense measures. If the value of shelters is accepted as a given, further work is needed with older and high socio-economic audiences to determine the source of their negative attitudes toward shelters, and to attempt to develop evidence and arguments which will be of value in changing these negative attitudes.

3. The relationship between fear of war, belief in the utility of shelters, and approval of a shelter program.

We found that belief in the utility of shelters was an important predictor of approval of a shelter program. An expectation of nuclear war also is correlated with approval; however, the relationship is small. The relationship among these three variables probably can best be explained in the context of the distinction between (a) attitudes toward adoption of a practice and (b) actual adoption of that practice. Further research on this question is needed; however, it seems plausible to argue that favorability toward shelter programs (attitude toward adoption) primarily is determined by a belief in the utility of the shelter, not by a belief in the probability of war. Actual adoption of the practice, the actual building of a shelter, probably rests in large part on one's belief in the probability of war, the imminence of danger. In short, one could argue that people will approve of shelters if they are convinced that they would help---but they won't build them until they believe they'll need to use them.

If there is merit in this argument, it raises an important implication for communication programming by the Office of Civil Defense. For ethical as well as policy reasons, the government probably does not want to exaggerate the probability of war; i.e., it does not want deliberately to raise a "war scare" among the people. It can and probably should continue to suggest that shelters would help in such an emergency. Given these two assumptions, it follows that the agency's communication program should: (a) emphasize the utility of shelters on a continuing basis during times of minimal international stress, and (b) have available on a stand-by basis for use in times of more severe international stress a complete communication program on the methods and techniques of constructing, preparing, and living in shelters.

4. The importance of the credibility of the source attributed to shelter messages.

Two of the questions used in this study provide preliminary evidence on the importance of source credibility as an affector of public attitudes. We asked people what kind of chance they thought shelters would give them to escape nuclear radiation. We also asked them whether they thought shelters would save a significant number of lives. The first question did not suggest any communication source. The second question invoked the President and the Secretary of Defense as sources; i.e., it stated that they both believed that shelters would save lives.

Most people who were favorable on the general question (said "some chance" or "very good chance") also were favorable on the second question (said shelters would save lives) and vice versa; however, 272 people answered the general question favorably but were unfavorable when the question was phrased in terms of the President and Secretary, and 193 people answered the general question unfavorably but were favorable when the question invoked the President and Secretary (see page 10 of this report).

We compared these two groups of people on each of our demographic variables. The two groups did not differ with respect to geographic area, size of community, sex, age, or race. They did differ with respect to occupation and socio-economic class. People who were favorable to the general question but unfavorable when the question invoked the President and Secretary of Defense were much more likely to be in managerial or white collar occupations (33%, compared with 13% in the other group and 21% in the entire sample) and also were much more likely to be in the higher socio-economic levels (30%, compared with 14% in the other group and 24% in the entire sample). Both of these variables (occupation and socio-economic class)

are correlated with political preference; furthermore, the observed differences are consistent with the party affiliation of the President and Secretary of Defense. It seems clear that use of these sources did affect the responses (positively for some and negatively for others), even though our other research indicates no general relationship between political preference and attitudes toward shelters.

From these data as well as other theory and research on source credibility, it can be inferred that the choice of particular sources to be used in civil defense messages is an important decision in communication planning.

Recommendations for Further Research

Results of this study indicate at least four areas in which continuing research should be conducted. These are:

1. The study of public attitudes toward shelters, the public's expectations of nuclear war, and the public's attitudes and beliefs toward other aspects of the cold war situation.

Given the responsibility for determining communication policy, it seems apparent that the Office of Civil Defense could profit from a continuing feedback and evaluation of the state of public opinion on key cold war, nuclear war, and civil defense issues. Such a study need not require separate opinion polling operations. A small number of crucial questions can be included in other public opinion surveys. These questions can provide a continuing check, at little cost, of the state of public opinion. It also would be valuable to record the chronology of events in the cold war and to relate these events to changes in public attitude as well as to other available indicators of public behavior (e.g., shelter construction, geographic mobility, etc.).

2. The study of appeals and other message variables which are effective with various American audiences; more specifically, this should include the study of message variables as they affect the unfavorable "target" audiences uncovered in the present study.

Variations in appeals, supporting evidence, channel selection, style, and other message variables affect the impact of civil defense messages on various segments of the public. Research incorporating these variations should continue. Special attention should be given to methods of approaching various key or target audiences; i.e., groups which are now opposed to civil defense and/or groups which are of special importance to the adoption and implementation of civil defense programs.

3. The study of the credibility of various sources which can be used in the transmission of civil defense messages.

Source credibility is a crucial variable in any communication program. Some of the questions relevant to it which need to be raised are: what kinds of sources are most effective with what kinds of audiences, what dimensions of source credibility are most salient for what kinds of message situations, what effect does continued presentation of civil defense messages have on the level of credibility attributed to a given source, what are the public's expectations as to the "meaning" of various sources, and so on.

4. The relationship between fear of war, belief in shelters, and actual adoption of or cooperation with an on-going shelter program.

Some possible relationships among these three variables were suggested earlier in this report. The suggested relationships are quite speculative; however, if accurate, the implications for civil defense communication are quite important. For this reason, further research is needed to probe in depth the ways in which the public incorporates these expectations and beliefs in their patterns of behavior.